

1. (Twice Amended) A method for controlling a magnetic actuator having a coil and an armature within a power switching device, the actuator being connected to a power line in a high voltage electrical distribution system, the method comprising:

inputting a power signal;

applying a first series of modulated current pulses having a first magnitude through the coil of the magnetic actuator connected to the power line in the high voltage electrical distribution system;

modifying the first magnitude of the first series of modulated current pulses; and

applying a second series of modulated current pulses having a second magnitude through the coil of the magnetic actuator connected to the power line in the high voltage electrical distribution system in a first direction such that the actuator moves from a first position to a second position.

8. (Twice Amended) A power switching control device for controlling a magnetic actuator within a power switching device connectable to a power line in a high voltage electrical distribution system, the control device comprising:

a power supply;

at least one actuator drive circuit adapted to provide a series of modulated current pulses to the magnetic actuator, the actuator being connectable to the power line in the high voltage electrical distribution system within the power switching device; and

a microprocessor for monitoring the series of modulated current pulses to determine whether to modify the magnitude of the modulated current pulses.

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24. (Twice Amended) A power switching device system comprising:

a power switching device having a magnetic actuator connectable to a power line in a high voltage electrical distribution system including a coil and an armature;

83 a power switching device controller adapted to apply a voltage across the coil for a predetermined interval of time, measure a current value in the coil during a portion of the predetermined interval of time, determine an impedance value for the coil based on the current value, compare the impedance value for the coil to a threshold impedance value for the coil and determine, based on the comparison, a characteristic of the magnetic actuator; and

a microprocessor for monitoring the series of modulated current pulses to determine whether to modify the magnitude of the modulated current pulses.

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38. (NEW) A method for controlling a magnetic actuator comprising:

84 applying a first series of modulated current pulses having a first magnitude through the coil of the magnetic actuator;

modifying the first magnitude of the first series of modulated current pulses; and

applying a second series of modulated current pulses having a second magnitude through the coil of the magnetic actuator.

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